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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/787,344	03/16/2001	Michael Hawkins	JYG147USA	8232

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EXAMINER

ANGEBRANNDT, MARTIN J

ART UNIT	PAPER NUMBER
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1756

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DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/787,344

Applicant(s)

HAWKINS ET AL.

Examiner

Martin J Angebrannt

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2001 and 04 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 16,17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 16, which layer contains the non-photosensitive light absorbing compound.

With respect to claim 17, is the reflective layer disposed on the coating layer.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3,5,12,14-16 and 19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by JP 09-211779.

The example teaches a white PET (polyethylene terephthalate) coated with a 10 microns thickness of a stilbene ((Ethenediyl)bis[benzene] --Merck index) in a polystyrene binder [0043-0044]. The use of various photochromic materials, including spiropyrans, fulgides and

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diary ethenes is disclosed. [0029-0030]. The use of various binders, including polystyrene, PVC, polycarbonate, PTFE, polyacrylonitrile, etc is disclosed. [0031].

The examiner holds the position that PET is not white alone, but must contain a white pigment to obtain this appearance. With respect to claim 19, any solvent coating process is held to be embraced by this claim.

6. Claims 1-3,5,12,14-16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-211779, in view of Shibahara et al. '463.

Shibahara et al. '463 teaches that white PET is made by incorporating titanium dioxide in the PET resin. (21/55-56, comparison example 1)

If it is not held that the white PET requires a pigment, then the examiner holds the position that it would have been obvious to one skilled in the art to modify the invention of JP 09-211779 by forming the white PET using known methods such as adding titanium dioxide as taught by Shibahara et al. '463 with a reasonable expectation of achieving the desired white PET.

Further, it would have been obvious to use other photochromic materials disclosed in JP 09-211779, in place of the stilbene, such as fulgides, in the product resulting from the combination with a reasonable expectation of forming a functional image recording medium based upon the disclosed equivalent function of these materials.

7. Claims 1-3,5,11,12 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hohenacker '169 and JP 09-211779, in view of Shibahara et al. '463.

Hohenacker '169 teaches the provision of a white or reflective layer backing the photochromic layer to increase sensitivity by reflecting a portion of the light back towards the photochromic recording material. (4/20-28). The formation of a mask/diaphragm on the

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photochromic layer is disclosed to reduce the amount of photosensitive material needed and to prevent inadvertent exposure ((light only reaches areas where picture info is desired to be stored) (2/4-64). The use of 3 to 500 regularly spaced circular holes is disclosed. (3/1-11) The diaphragm may be 5 mm thick. (3/20-32)

It would have been obvious to modify the invention of Hohenacker '169 by using a white plastic backing material as taught by the combination of JP 09-211779 and Shibahara et al. '463 based upon the direction within Hohenacker '169 to a white backing material with a reasonable expectation of forming a useful article with the same functionality. Alternatively, it would have been obvious to modify the invention of JP 09-211779 and Shibahara et al. '463 described above by adding the masking element to reduce the amount of photochromic material needed and the prevent exposure in undesired areas.

8. Claims 1-3,5,11,12 and 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hohenacker '169 and JP 09-211779, in view of Shibahara et al. '463, further in view of Sambrook-Smith, et al. WO 91/12139.

Sambrook-Smith, et al. WO 91/12139 teaches the tinting of the photochromic layer with pigments or dyes which do not degrade in UV or visible light. (10/20-24). The use of exposure through a photomask is also disclosed. (11/34-12/13 and 21/1-4)

In addition to the basis provided above, the examiner holds that it would have been obvious to tint the photochromic composition of Hohenacker '169 and JP 09-211779 combined with Shibahara et al. '463 as taught by Sambrook-Smith, et al. WO 91/12139 as this is known in the art and may increase contrast with appropriate choice of tinting.

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9. Claims 1,2,12,14-16 and 19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Goudjil '090.

See example 1, with the spirooxazine coated on the white plastic card. (8/1-23).

The examiner holds the position that plastic is not white alone, but must contain a white pigment to obtain this appearance.

10. Claims 1,12,14-16 and 19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Muira et al. '584.

Muira et al. '584 describes a white polycarbonate card substrate coated with a phthalocyanine recording layer. (example 2) Examples 1 and 3 used a white PVC substrate

The examiner holds the position that polycarbonate and PVC are not white alone, but must contain a white pigment to obtain this appearance. See example 4 describing the use of a clear/transparent polycarbonate substrate.

11. Claims 1,12,14-16 and 19 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kanome et al. '380.

Kanome et al. '380 describes a white polycarbonate card substrate coated with a dye based recording layer. (example 7) .

The examiner holds the position that polycarbonate is not white alone, but must contain a white pigment to obtain this appearance. See the other substrate in example 7 describing the use of a clear/transparent polycarbonate substrate.

12. Claims 1,2,12,14-16,19 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goudjil '197, in view of Busnell et al. '247.

Goudjil '197 teaches the printing of photochromic compound and polymer containing inks using screen printing onto plastic, paper, TYVEC or the like. (4/7-42). The use of white backgrounds to allow better visualization is disclosed. (5/10-14).

Busnell et al. '247 describes the use of white vinyl plastic in forming wristbands (1/70-72)

It would have been obvious to modify example 1 of Goudjil '197 by using the white vinyl substrate of Busnell et al. '247 to improve the visualization of the photochromic color. The choice of pattern is considered routine optimization and does not confer patentability on the process anymore than taking a photograph or printing a picture of a horse or any other article would.

13. Claims 1,2,12,14-16,19,20 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goudjil '197, in view of Busnell et al. '247 and Kamada et al. '132.

Kamada et al. '132 teaches the use of various printing techniques including screen printing, offset printing and gravure printing with photochromic inks (5/52-66). These may be used with plastic substrates. (6/20-27)

In addition to the basis provided above, it would have been obvious to modify the teachings of Goudjil '197 combined with Busnell et al. '247 by using other printing techniques disclosed as equivalents by Kamada et al. '132 for printing photochromic inks.

14. Claims 1,12-16,19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 62-070850.

JP 62-070850 teaches a thermal transfer ribbon in example1 which comprises a polyester ribbon with two layers of aluminum coated on it and then overcoated with a heat emitting

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(electrically) resistive layer, then the other side of the polyester film/ribbon is solvent coated with a thermosensitive ink layer containing a binder and a metalized dye. (page 5/lower columns) The use of various dyes is disclosed. (page4/upper left column). The binders may be waxes or polymers (page4,upper left column). The base layer (polyster layer of example) may be transparent or white. The white color is acheived by adding pigments, such as titanium oxide (page 3/lower columns)

It would have been obvious to one skilled in the art to modify the invention of example 1 by using a white polymer support and using a polymeric binder based upon the disclosure of equivalence within JP 62-070850 in the cited portion of the document.

15. Claims 1,2,12-16,19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 62-070850, in view of Yamane '420.

Yamane '420 teaches the use of heat/thermal transfer sheets where the coloring agent may be any dye, pigment, fluorescent or photochromic materials. (9/128).

In addition to the basis provided above, it would have been obvious to modify the articles and process of forming it described above by using photochromic dyes disclosed by Yamane '420 in place of the other dyes with the advantage of the color changes available in the final image due to the use of the photochromic materials.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin J Angebrannndt whose telephone number is 703-308-4397. The examiner can normally be reached on Mondays-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703-308-2464. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Martin J. Angebrannndt
Primary Examiner
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March 21, 2003